HHS Public Access

Author manuscript

Am J Prev Med. Author manuscript; available in PMC 2019 January 01.

Published in final edited form as:

Am J Prev Med. 2018 January ; 54(1): 129–132. doi:10.1016/j.amepre.2017.08.031.

Injuries From Physical Abuse: National Survey of Children's Exposure to Violence I–III

Thomas R. Simon, PhD[1], **Anne Shattuck, PhD**[2], **Akadia Kacha-Ochana, MPH**[3], **Corinne F. David-Ferdon, PhD**[1], **Sherry Hamby, PhD**[4], **Megan Henly, PhD**[2], **Melissa T. Merrick, PhD**[1], **Heather A. Turner, PhD**[2], and **David Finkelhor, PhD**[2]

[1]Division of Violence Prevention, National Center for Injury Prevention and Control, Centers for Disease Control and Prevention, Atlanta, Georgia

[2]Crimes Against Children Research Center, Department of Sociology, University of New Hampshire, Durham, New Hampshire

[3]Research and Quality Improvement, Juvenile Protective Association, Chicago, Illinois

[4]Department of Psychology, Sewanee, University of the South, Sewanee, Tennessee

Abstract

Introduction—Official data sources do not provide researchers, practitioners, and policy makers with complete information on physical injury from child abuse. This analysis provides a national estimate of the percentage of children who were injured during their most recent incident of physical abuse.

Methods—Pooled data from three cross-sectional national telephone survey samples (N=13,052 children) included in the National Survey of Children's Exposure to Violence completed in 2008, 2011, and 2014 were used.

Results—Analyses completed in 2016 indicate that 8.4% of children experienced physical abuse by a caregiver. Among those with injury data, 42.6% were injured in the most recent incident. No differences in injury were observed by sex, age, race/ethnicity, or disability status. Victims living with two parents were less likely to be injured (27.1%) than those living in other family structures (53.8%–59%, $p<0.001$). Incidents involving an object were more likely to result in injury (59.3% vs 38.5%, $p<0.05$). Injured victims were significantly more likely to experience substantial fear (57.3%) than other victims (34.4%, $p<0.001$).

Conclusions—A substantial percentage of physical abuse victims are physically hurt to the point that they still feel pain the next day, are bruised, cut, or have a broken bone. Self-report data indicate this is a more common problem than official data sources suggest. The lack of an object in an incident of physical abuse does not protect a child from injury. The results underscore the impact of childhood physical abuse and the importance of early prevention activities.

Address correspondence to: Thomas R. Simon, PhD, Division of Violence Prevention, National Center for Injury Prevention and Control, Centers for Disease Control and Prevention, 4770 Buford Highway NE, MS F-64, Atlanta GA 30341. tsimon@cdc.gov.

INTRODUCTION

More than 1,500 children in the U.S. die from maltreatment each year.[1] Nonfatal injuries from physical abuse are far more common, but hospital data are an underestimate because injuries might go untreated.[2] In a national survey conducted in 2005, more than one in ten youth aged 12 to 17 years reported having ever experienced injurious spanking or other serious physical abuse.[3] This estimate corresponds to roughly 3 million adolescents experiencing an injury. A complete understanding of injury consequences from physical abuse is essential to help stakeholders describe the severity of these experiences and the importance of early prevention.

In particular, research is needed to understand the injury consequences of physical abuse across childhood and how the consequences vary by characteristics of the victim, perpetrator, and context. Merging data from all three National Surveys of Children's Exposure to Violence (NatSCEV) allows for subgroup analyses for youth victims of physical abuse by a caregiver at a level of precision not previously possible.

METHODS

Study Sample

The data for this analysis are from three NatSCEV telephone surveys conducted in 2008, 2011, and 2014 with representative samples of U.S. children. Youth aged 10–17 years were interviewed directly about their experiences, whereas information about children aged <10 years was obtained through interviews with a caregiver. Details of the methodology, including the safety and reporting protocols, are provided in prior publications.[4–6] Using the American Association for Public Opinion Research Response Rate #4 calculation, the NatSCEV I survey achieved a 55% response rate; NatSCEV II, 44.6%; and the NatSCEV III, 24.1%.[7] The decline in response rates between NatSCEV I and NatSCEV III is consistent with the trend in telephone surveys. The pooled sample included 13,052 children and youth, and the analyses were completed in 2016.

Measures

Information on children's exposure to violence was collected using the Juvenile Victimization Questionnaire.[8,9] Physical abuse by a caregiver was assessed by explaining: *Next we are going to ask about grown-ups who take care of you. This means parents, babysitters, adults who live with you, or others who watch you.* For children aged <10 years, these questions were directed at caregivers and asked about the experiences of *your child*. Respondents were asked the following: *Not including spanking on your bottom, at any time in your life did a grown-up in your life hit, beat, kick, or physically hurt you in any way?* Injury was assessed by asking victims the following: *Were you physically hurt when this happened? Hurt means you could still feel pain in your body the next day. You are also hurt when you have a bruise, a cut that bleeds, or a broken bone.* In addition, fear was assessed by asking: *Thinking back to when it happened, how afraid did you feel? Would you say you felt…not at all afraid, a little afraid, or very afraid?* The study was approved by the IRB of the University of New Hampshire.

Statistical Analysis

Weights were developed for each NatSCEV administration to adjust for nonresponse and differential probability of selection.[4,6] Chi-square tests were used to test for differences in injury status by demographic characteristics of the child, family structure, disability of the child, and use of an object.

RESULTS

Within the merged sample, 8.4% of children had experienced physical abuse by a caregiver in their lifetime. Because of an error in the skip pattern, a subset of victims (13%) were not asked information about injury. Among those with data available on injury, 42.6% of victims (equates to 3.3% of children) were injured in the most recent incident (Table 1).

Among those who reported lifetime physical abuse, the percentage injured at the most recent incident did not vary significantly by sex, age group, or race/ethnicity (Table 2). Victims from a two-parent household were less likely to report being injured than those from any other household structure ($p<0.001$). The percentage injured was similar regardless of physical disability or emotional/behavioral diagnosis. Incidents involving the use of an object were significantly more likely to result in an injury (59.3%) than those that did not (38.5%). Reports of feeling “very afraid” were significantly ($p<0.001$) more likely among children who were injured (57.3%) relative to children who were not injured (34.4%) during the most recent experience of physical abuse (data not shown).

DISCUSSION

More than 40% of physical abuse victims were injured in the most recent incident. These children were physically hurt to the point that they still felt pain the next day or they were bruised, cut, or had a broken bone. A substantial proportion of injured and non-injured victims reported feeling “very afraid,” with fear being more likely among injured victims. These findings underscore the importance of self-report data for assessing the consequences of physical abuse. Injury and fear are the most immediate consequences of what could be lifelong negative effects from physical abuse.[10]

Risk for injury was consistently high regardless of the child’s physical or emotional disability status. Children in a living arrangement other than with two biological parents were at elevated risk. These families might benefit from prevention strategies related to attaining appropriate child care and other family supports, including skills-based training for all caregivers in the home.

The finding that injury risk did not vary significantly by victim’s age contributes to the contradictory findings from prior research. Studies using medical or protective services records have found significantly higher injury risk among the youngest victims.[1,2] This has been attributed to heightened vulnerability for injury because of smaller size and increased likelihood young victims will be recognized and reported. Data from community professionals often do not find higher risk among younger children.[11] The current results

suggest that self-report data might be more sensitive to, and allow more complete assessment of, the types of injuries that older children experience.

Injury was more likely when an object was used, but more than a third of victims were injured in incidents without an object. Clearly, the lack of an object does not protect a child from injury. Child maltreatment prevention efforts should emphasize the risks for child injury and fear from all forms of physical abuse, not just from use of objects.[12]

Limitations

Several limitations should be considered when interpreting the results. First, the survey only includes information on injury at last abuse incident, so NatSCEV provides a conservative estimate of the total percentage of victims who were injured. This limitation also diminishes the likelihood of finding significant differences by injury status because some of those coded as non-injured might have been injured previously. Second, although estimates are higher than those from official sources, self-report data from youth or caregivers are also subject to misreporting. Third, a subset of victims (13%) was not asked information about injury. Data from these victims could have potentially changed the patterns observed.

CONCLUSIONS

The pooled NatSCEV data suggest that injurious acts of child abuse are substantially underrepresented in official records but are significant events for young victims. Prevention strategies that enhance safe, stable, and nurturing relationships and environments are important for improving the health and well-being of children. To help communities prioritize efforts, the Centers for Disease Control and Prevention released a technical package that describes child maltreatment prevention activities based on the best available evidence.[13]

Acknowledgments

This project was supported by grants 2006-JW-BX-0003 and 2009-JW-BX-0018 from the Office of Juvenile Justice and Delinquency Prevention, Office of Justice Programs, U.S. Department of Justice. The total amount of federal funding involved is $2,848,809. For the purposes of compliance with §507 of Pub L No. 104-208 (the Stevens Amendment), readers are advised that 100% of the funds for this program are derived from federal sources.

The findings and conclusions in this report are those of the authors and do not necessarily represent the official position of the Centers for Disease Control and Prevention.

No financial disclosures were reported by the authors of this paper.

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Table 1

Prevalence of Lifetime Physical Abuse With Injury— Pooled Data From National Survey of Children's Exposure to Violence I–III (*n*=13,052)

Victimization status	*n*	Percentage[a]
Physical abuse	1,013	8.4
With injury	375	3.3
No injury	506	4.1
Injury data missing[b]	133	1.1

[a] Percentages are weighted.

[b] A subset of victims (13%) were not asked information about injury. These victims had also experienced another type of victimization in the same incident, such as property crime, for which injury was not relevant, and the interview focused on that victimization type.

Table 2

Child Injury by Characteristics of the Child, Family, and Incident Among Victims of Physical Abuse (*n*=881)[a]

	Injured during most recent physical abuse	
Characteristic of the child, family, incident	***n***	**Row %[b]**
Sex		
Male	210	42.2
Female	165	47.7
Age group, years		
0–5	30	48.2
6–9	39	37.7
10–13	86	40.3
14–17	220	48.2
Race/ethnicity[c]		
White, non-Hispanic	231	43.3
Black non-Hispanic	50	55.1
Other race, non-Hispanic	19	29.0
Hispanic	73	45.8
Family structure		
Two parents	144	**27.1****
Parent plus step/partner	66	53.8
Single parent	126	58.5
Other caregiver	39	59.0
Any physical disability[d]		
No	335	42.2
Yes	40	45.5
Any emotional/behavioral diagnosis[e]		
No	259	42.3
Yes	116	50.6
Object used in the abuse[f]		
No	228	38.5
Yes	82	**59.3***
Missing	65	55.6

Note: Boldface indicates statistical significance (

*$p<0.05$;

**$p<0.001$).

[a]A subset of abuse victims (13%) were not asked information about injury. These victims had also experienced another type of victimization in the same incident, such as a property crime, for which injury was not relevant, and the interview focused on that victimization type.

[b]Row percentages are weighted.

[c] Two cases were missing data for race/ethnicity.

[d] Physical disability is coded as a response of YES to the question *Has your [CHILD'S AGE]-year old ever been diagnosed with a physical disability? This would be a physical or medical problem that affects the kinds of activities that he or she can do*.

[e] Emotional/behavioral diagnosis is coded as responding YES to any of the choices for the question *Has your [CHILD'S AGE]-year-old ever been diagnosed by a doctor, therapist, or other professional with any of the following: post-traumatic stress disorder (PTSD) or other anxiety disorder; attention deficit disorder or attention deficit hyperactivity disorder (ADD, ADHD); oppositional/defiant disorder or conduct disorder (ODD or CD); autism, pervasive developmental disorder (PDD) or Asperger's; developmental delay or retardation; depression*.

[f] Object used in the abuse was assessed by asking *Did the person who did this use any of these?* and providing responses that included *gun*, *knife, stick*, *rock*, *bottle*, or *tool such as a hammer*. Respondents who reported some other object not in this list were also coded as having an object used against them during the incident.